

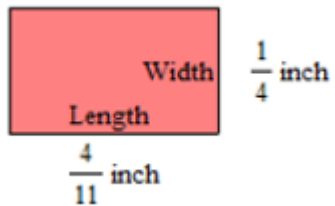
**PRACTICE TEST – FINAL EXAM**

Beginning and Intermediate Algebra by Elayn Martin-Gay, 6th edition

1. Simplify the expression:  $\frac{5+6(3+1)}{9^2+5}$
2. Evaluate the expression:  $\frac{x}{z} + 2y$  if  $x=10$ ,  $y=5$ , and  $z=2$ .
3. Simplify: Subtract  $8y+7$  from  $6y-7$ .
4. Write the following phrase as an algebraic expression and simplify if possible. Let  $x$  represent the unknown number. Triple a number, minus the sum of the number and five.

**Solve:**

5.  $6y + 2(y-9) = 3(y+1) - 2$
6.  $\frac{5}{9}x - \frac{1}{3} = 3$
7. Find the area of the figure below. (The area of a rectangle is the product of its length and width.)



Substitute the given values into the formula and solve for the unknown variable.

8.  $A = \frac{1}{2}(B+b)h$ ;  $A=75$ ,  $b=9$ ,  $B=6$

Complete the table of ordered pairs for the given linear equation and graph.

9.  $y = -4x + 6$

x	y
0	
1	
2	

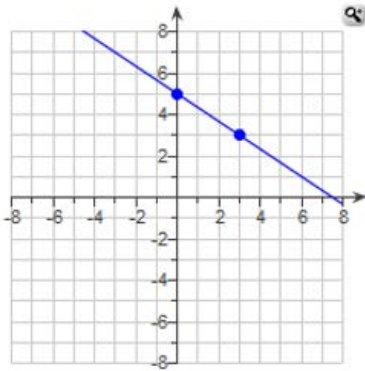
**Graph the linear equation:**

10.  $y = -\frac{1}{2}x + 1$

11.  $y = -5$

12.  $x - 3y = 9$

13. Find the slope of the line:



14. Use the slope-intercept form to graph the equation.  $y = \frac{3}{5}x - 5$

15. Find the equation of the line. Slope =  $-\frac{1}{3}$ , through  $(-3, -6)$

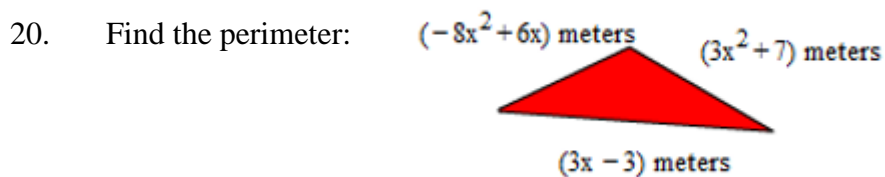
**Problems 16 - 19: Simplify. Write answers with positive exponents only.**

16.  $x^9 x^8$

17.  $\left(\frac{1}{4}\right)^{-2}$

18.  $\frac{y^{-4}}{y}$

19.  $(-2x^4 y^{-5})(3x^{-1} y^3)$



**Perform the indicated operation:**

21.  $(4x^7)(-3x^7)(4x^8)$

22.  $(2x - 7)(3x + 5)$

23.  $(4x - 2y)^2$

24.  $\frac{8x^2 + 18x + 2}{4x + 3}$

25. Factor by grouping:  $5xy - 15x + 2y - 6$

# MATH0361 Practice Final Exam Solutions:

1)  $\frac{29}{86}$

2) 15

3)  $-2y - 14$

4)  $2x - 5$

5)  $\frac{19}{5}$

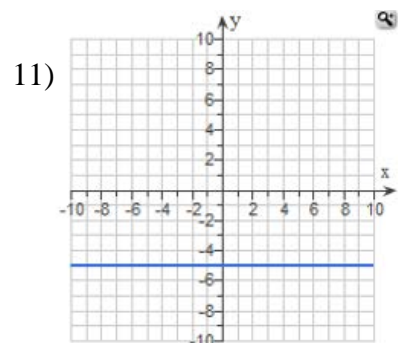
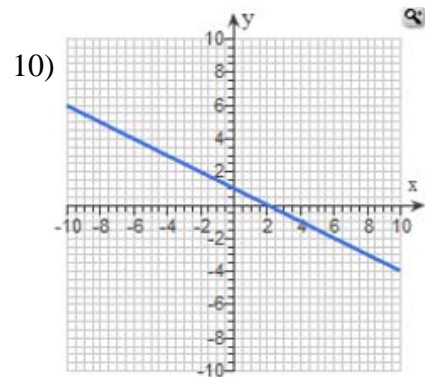
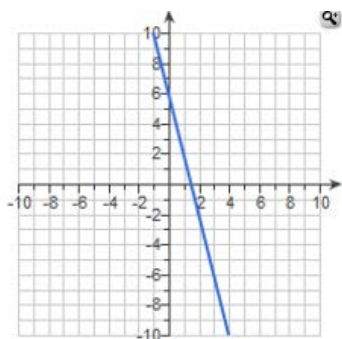
6)  $x = 6$

7)  $\frac{1}{11}$  sq in

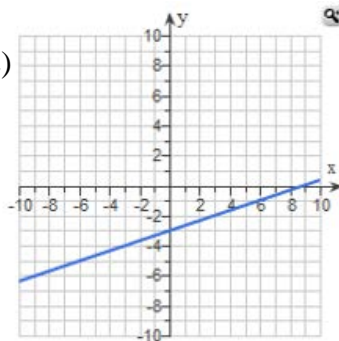
8)  $h = 10$

9)

x	y
0	6
1	2
2	-2

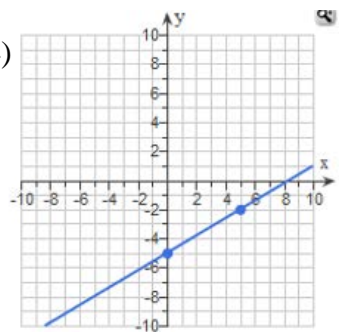


12)



13)  $-\frac{2}{3}$

14)



15)  $y = -\frac{1}{3}x - 7$

16)  $x^{17}$

17) 16

18)  $\frac{1}{y^5}$

19)  $-\frac{6x^3}{y^2}$

20)  $-5x^2 + 9x + 4$

21)  $-48x^{22}$

22)  $6x^2 - 11x - 35$

23)  $16x^2 - 16xy + 4y^2$

24)  $2x + 3 - \frac{7}{4x + 3}$

25)  $(5x + 2)(y - 3)$